

AMENDMENTS TO THE CLAIMS:

1-2. (Canceled)

3. (Currently amended) The mobile communication system according to claim 1,
wherein said switching selecting means configured to switch said transmission mode to
~~a-the fast mode faster than a current mode when detection of successful receipt of said the data~~
~~transmission by said detecting means continues has been detected for m times, (m where m is~~
~~an integer larger than n)~~2.

4. (Canceled)

5. (Currently amended) The mobile communication system according to claim 3,
wherein said switching selecting means is configured to ~~determine switching switch to~~
~~said faster the fast mode according to based on~~ a target block error rate in ~~said the data~~
transmission.

6. (Currently amended) A ~~The~~ mobile communication system according to claim 1, for
transmitting data, in a unit of a block of data, in any one of a plurality of transmission modes,
said system comprising:

a base station;

a base station control apparatus for controlling said base station;

a mobile station comprising a detecting unit for detecting a receiving error in a unit of a block of data during the data transmission;

switching selecting means for switching the transmission mode, based on the detection of the receiving error,

wherein said switching selecting means is configured to switch said the transmission mode to a first slow mode, which is slower than a current mode, when a-the block error rate in a first predetermined first number of blocks set in advance is larger than a first predetermined block error rate, set in advance and to switch said the transmission mode to a fast mode, which is faster than the current mode, when a-the block error rate in a second predetermined number of blocks set in advance (second predetermined number of blocks > first predetermined number of blocks) is smaller than a second predetermined block error rate, set in advance and to switch the transmission mode to a second slow mode, slower than the current mode, when the block error rate in the second predetermined number of blocks is equal to or larger than a third predetermined block error rate, set in advance where the second predetermined number of blocks is greater than the first predetermined number of blocks.

7. (Currently amended) The mobile communication system according to claim 6, wherein said switching selecting means is further configured to determine said the first predetermined number of blocks, said the second predetermined number of blocks, said the first predetermined block error rate, said the second predetermined block error rate, and said the third predetermined block error rate according to a target block error rate in said the data transmission.

8. (Currently amended) A ~~The~~ mobile communication system according to claim 1, for transmitting data, in a unit of a block of data, in any one of a plurality of transmission modes, said system comprising:

a base station;
a base station control apparatus for controlling said base station;
a mobile station comprising a detecting unit for detecting a receiving error in a unit of a block of data during the data transmission;
switching selecting means for switching the transmission mode, based on the detection of the receiving error,

wherein said switching selecting means configured to switch ~~said~~ the transmission mode to a first slow mode, which is slower than a current mode, when a ~~the~~ block error rate in ~~is~~ during a first predetermined first time period set in advance is larger than a first predetermined block error rate, set in advance and to switch said ~~the~~ transmission mode to a fast mode, which is faster than the current mode, when a ~~the~~ block error rate in ~~is~~ during a second predetermined time period set in advance (second predetermined time > first predetermined time) is smaller than a second predetermined block error rate, set in advance and to switch the transmission mode to a second slow mode, which is slower than the current mode, when the block error rate in the second predetermined time period is equal to or larger than a third predetermined block error rate, set in advance where the second predetermined time period is greater than the first predetermined time period.

9. (Currently amended) The mobile communication system according to claim 8,
wherein ~~said switching selecting means is configured to make the second~~
~~predetermined time period for the condition for switching said transmission mode to said faster~~
~~mode is shorter than the third predetermined time for the condition for switching said~~
~~transmission mode to said slower mode period.~~

10. (Currently amended) The mobile communication system according to claim 9,
wherein ~~said switching selecting means is configured to make a rate of the second~~
~~predetermined time period for switching said transmission mode to said faster mode and the~~
~~third predetermined time period for switching said transmission mode to said slower mode~~
~~equal to are based on a ratio of data transmission speeds in the fast mode and the second slow~~
~~mode.~~

11. (Currently amended) The mobile communication system according to claim 8,
wherein said switching selecting means further configured to determine ~~said the first~~
~~predetermined time period, said the second predetermined time period, said the first~~
~~predetermined block error rate, said the second predetermined block error rate, and said the~~
~~third predetermined block error rate according to a target block error rate in said the data~~
~~transmission.~~

12. (Currently amended) The mobile communication system according to claim ~~4~~6,
wherein said switching selecting means is disposed ~~any one of in~~ said base station,

Serial No.: 10/083,477
Docket No.: 01-053452
YAN.019

~~control apparatus, said base station and said mobile station.~~

13. (Canceled)

14. (Canceled)

15. (Currently amended) The transmission mode switching method according to claim-13
18,

~~wherein said second step is arranged to switch said the transmission mode is switched to a the fast mode faster than a current mode when detection of successful receipt of said the data transmission in said first step continues for has been detected m times, where (m-m) is an integer larger than n) 2.~~

16. (Canceled)

17. (Currently amended) The transmission mode switching method according to claim-15
18,

~~wherein said second step is arranged to determine switching to said faster the fast mode according to-is based on a target block error rate in said the data transmission.~~

18. (Currently amended) A The transmission mode switching method according to claim-13, for selecting any one of a plurality of transmission modes for data transmission of a unit of

Serial No.: 10/083,477
Docket No.: 01-053452
YAN.019

a block of data between a base station controlled by a base station control apparatus and a mobile station, said method comprising:

detecting a receiving error in a unit of a block of data during the data transmission to said mobile station; and

wherein said second step is arranged to switch said-on detection of the receiving error, switching the transmission mode to a first slow mode, which is slower than a current mode, when a-the block error rate in a first predetermined first number of blocks set in advance is larger than a first predetermined block error rate, set in advance and switch said switching the transmission mode to a fast mode, which is faster than the current mode, when a-the block error rate in a second predetermined number of blocks set in advance (second predetermined number of blocks > first predetermined number of blocks) is smaller than a second predetermined block error rate, set in advance and switching the transmission mode to a second slow mode, slower than the current mode, when the block error rate in the second predetermined number of blocks is equal to or larger than a third predetermined block error rate, set in advance where the second predetermined number of blocks is greater than the first predetermined number of blocks.

19. (Currently amended) The transmission mode switching method according to claim 18, wherein said second step is arranged to determine said the first predetermined number of blocks, said the second predetermined number of blocks, said the first predetermined block error rate, said the second predetermined block error rate, and said the third predetermined block error rate according to are based on a target block error rate in said the data transmission.

20. (Currently amended) A ~~The~~ transmission mode switching method according to claim 13, for selecting any one of a plurality of transmission modes for data transmission of a unit of a block of data between a base station controlled by a base station control apparatus and a mobile station, said method comprising:

detecting a receiving error in a unit of a block of data during the data transmission to said mobile station; and

wherein said second step is arranged to switch said on detection of the receiving error, switching the transmission mode to a first slow mode, slower than a current mode, when a the block error rate in a first predetermined first time period set in advance is larger than a first predetermined block error rate, set in advance and switch said switching the transmission mode to a fast mode, faster than the current mode, when a the block error rate in a second predetermined time period set in advance (second predetermined time > first predetermined time) is smaller than a second predetermined block error rate, set in advance and switching the transmission mode to a second slow mode, slower than the current mode, when the block error rate in the second predetermined time period is equal to or larger than a third predetermined block error rate, set in advance where the second predetermined time period is greater than the first predetermined time period.

21. (Currently amended) The transmission mode switching method according to claim 20, wherein ~~said second step is arranged to make the predetermined time period for the condition for switching said the transmission mode to said faster the fast mode is shorter than~~

the predetermined time period for the condition for switching said the transmission mode to said slower the second slow mode.

22. (Currently amended) The transmission mode switching method according to claim 21, wherein ~~said second step is arranged to make a rate of the predetermined time period~~ for switching said the transmission mode to said faster the fast mode and the predetermined time period for switching said the transmission mode to said slower the second slow mode equal to are based on a ratio of data transmission speeds.

23. (Currently amended) The transmission mode switching method according to claim 20, ~~wherein said second step is arranged to determine said the first predetermined time period, said the second predetermined time period, said the first predetermined block error rate, said the second predetermined block error rate, and said the third predetermined block error rate according to are based on~~ a target block error rate in said the data transmission.

24. (Canceled)

25. (Currently amended) A recording medium having recorded therein a program of a transmission mode switching method of a mobile communication system capable of selecting any one of a plurality of transmission ~~mode-modes~~ used for data transmission of a unit of a block of data between a base station controlled by a base station control apparatus and a mobile station, wherein the program causes a computer to:

~~execute processing for detecting occurrence of detect a receiving error of a unit of a block of data in said the data transmission in-to said mobile station, and processing for performing switching of said on detection of the receiving error, switch the transmission mode based on the occurrence of said receiving error to be detected to a first slow mode, which is slower than a current mode, when the block error rate in a first predetermined number of blocks is larger than a first predetermined block error rate, switch the transmission mode to a fast mode, which is faster than the current mode, when the block error rate in a second predetermined number of blocks is smaller than a second predetermined block error rate, and switch the transmission mode to a second slow mode, slower than the current mode, when the block error rate in the second predetermined number of blocks is equal to or larger than a third predetermined block error rate, where the second predetermined number of blocks is greater than the first predetermined number of blocks.~~

26. (New) The mobile communication system according to claim 6,
wherein said switching selecting means is disposed in said base station control apparatus.
27. (New) The mobile communication system according to claim 6,
wherein said switching selecting means is disposed in said mobile station.
28. (New) The mobile communication system according to claim 6, wherein the first slow mode and the second slow mode are the same.

Serial No.: 10/083,477
Docket No.: 01-053452
YAN.019

29. (New) The mobile communication system according to claim 8, wherein the first slow mode and the second slow mode are the same.
30. (New) The mobile communication system according to claim 8, wherein said switching selecting means is disposed in said base station.
31. (New) The mobile communication system according to claim 8, wherein said switching selecting means is disposed in said base station control apparatus.
32. (New) The mobile communication system according to claim 8, wherein said switching selecting means is disposed in said mobile station.
33. (New) A recording medium having recorded therein a program of a transmission mode switching method of a mobile communication system capable of selecting any one of a plurality of transmission modes used for data transmission of a unit of a block of data between a base station controlled by a base station control apparatus and a mobile station, wherein the program causes a computer to:
detect a receiving error of a unit of a block of data in the data transmission to said mobile station, and on detection of the receiving error, switch the transmission mode to a first slow mode, slower than a current mode, when the block error rate in a first predetermined time

Serial No.: 10/083,477
Docket No.: 01-053452
YAN.019

period is larger than a first predetermined block error rate, switch the transmission mode to a fast mode, faster than the current mode, when the block error rate in a second predetermined time period is smaller than a second predetermined block error rate, and switch the transmission mode to a second slow mode, slower than the current mode, when the block error rate in the second predetermined time period is equal to or larger than a third predetermined block error rate, where the second predetermined time period is greater than the first predetermined time period.